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2837

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER NUMBER
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DATE MAILED:

11/11/94

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/325,026

Applicant(s)

ROZENZON ET AL.

Examiner

Luz L. Alejandro

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) 16-28, 35-40 and 52-70 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 29-34, 41-51 and 71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner. _
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of group I and species A, claims 1-15, 29-34, 41-51 and 71, in Paper No. 10 is acknowledged. The traversal is on the ground(s) that the office action failed to state a proper basis for the restriction requirements. This is not found persuasive because the office action paper #7, mailed on 9/26/00, stated the basis for the restriction requirements of the claims of the instant application.

Claims 18-28 and 35-40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Also, claims 16-17, and 52-70 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected specie, there being no allowable generic or linking claim.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: reference numbers 131 and 132 (see page 7, lines 7 and 6, respectively). Correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "at least about" in claim 15 is a relative term which renders the claim indefinite. The term "at least about" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim 1 and 29-34, 41-44, 46-51 and 71 are rejected under 35 U.S.C. 102(b) as being anticipated by Degner et al., U.S. Patent 5,074,456.

Degner et al. shows the invention as claimed including a processing chamber 50, comprising: a chamber body having a substrate support member 58 (first electrode)

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disposed therein; a chamber cover, comprising: a retaining ring 14 and a lid, wherein the lid comprises a second electrode 10 opposed to the first electrode, and comprising a first plate 80 and a second plate 64 connected together and defining a fluid channel 84 therebetween; a fluid inlet and outlet fluidly connected to the fluid channel; and a power source connected to the second electrode (see figures 3 and 4 and their descriptions). Furthermore, the reference in col. 3-line 51 to col. 5-line 17 further disclose the claimed materials of claims 31-32, 34 and 47-51.

Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Lei et al., U.S. Patent 5,968,276.

Lei et al. shows the invention as claimed including a processing chamber comprising a chamber cover which comprises a retaining ring and a lid; wherein the lid comprises a first plate 86 and a second plate 84 connected together and defining a fluid channel 68 therebetween; a fluid inlet and outlet fluidly connected to the fluid channel; and feedthroughs 20 having the claimed characteristics. It is inherent to one having ordinary skill in the art that the processing chamber will further comprise a chamber body and a substrate support member disposed therein.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-15 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Degner et al., U.S. Patent 5,074,456 in view of Lei et al., U.S. Patent 5,968,276.

Degner et al. is applied as above but lacks anticipation of showing the claimed feedthrough. Lei et al. disclosed an apparatus which comprises a similar chamber cover that Degner et al., and comprising a feedthrough 20 having the claimed characteristics (see figures 1-3 and 10, and their descriptions). In view of this disclosure it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus disclosed by Degner et al. as to further comprise the claimed feedthrough because such arrangement provides for increase coolant liquid flow and allows maintenance or disassembly of the feedthrough without breaking the seal on the coolant liquid system as disclosed by Lei et al. in the abstract.

Degner et al. and Lei et al. do not expressly disclosed that the first and the second plates each comprise a portion of the fluid channel, and that the passageway surface area comprises at least about 35% of the surface area of the lid. In view of the lack of unexpected results, and significant evidence to support that the choice of a fluid channel being made by both of the plates comprising a portion of the channel would significantly affect the overall performance of the plasma processing apparatus, it would have been an obvious choice of design to one having ordinary skill in the art at the time the invention was made to modify the apparatus disclosed by the Degner et al. and Lei et al. references, as to made the first and second plates to comprise a portion of the fluid channel. With respect to the claimed passageway surface area of the lid, such limitation is considered to involve routine optimization while has been held to be within the level of ordinary skill in the art. Therefore, one of ordinary skilled in the art at the time the invention was made would have modified the apparatus disclosed by the Degner et al. and Lei et al. references by having a passageway surface area at least 35% of the surface area of the lid in order to optimize the apparatus.

Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lei et al., U.S. Patent 5,968,276.

Lei et al. is applied as above but lacks anticipation of showing that the first and the second plates each comprise a portion of the fluid channel, and that the passageway surface area comprises at least about 35% of the surface area of the lid. In view of the lack of unexpected results and significant evidence to support that the

choice of a fluid channel being made by both of the plates comprising a portion of the channel would significantly affect the overall performance of the plasma processing apparatus, it would have been an obvious choice of design to one having ordinary skill in the art at the time the invention was made to modify the apparatus disclosed by the Lei et al. reference, as to made the first and second plates to comprise a portion of the fluid channel. With respect to the claimed passageway surface area of the lid, such limitation is considered to involve routine optimization while has been held to be within the level of ordinary skill in the art. Therefore, one of ordinary skilled in the art at the time the invention was made would have modified the apparatus disclosed by the Lei et al. reference by having a passageway surface area at least 35% of the surface area of the lid in order to optimize the apparatus.

Conclusion

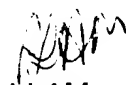
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yau et al., U.S. 4,917,044; Liu et al., U.S. 6,170,430 B1; Cook, U.S. 6,167,837; Zhao et al., U.S. 6,051,286; Davis et al., U.S. 4,891,087; Saxena, U.S. 5,472,508; and Kubacki, U.S. 4,262,631, are cited because they disclose an apparatus similar to the instant invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 703-305-4545. The examiner can normally be reached on 5/4/9.

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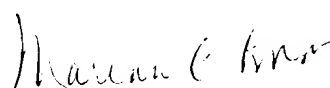
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 703-308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3599 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



LLAM

July 2, 2001


MARIAN C. KNODE
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